

REMARKS

Claims 1-32, 34, 35, and 55 have been cancelled without prejudice. Claim 107 has been added. Claims 33, 36, 37, 40-44, 47, 49, 51, 53, 58 and 59 have been amended. Upon entry of this paper, claims 33, 36-54, 56-62 and 107 will be pending and under consideration.

Claim 33, step (a) has been amended to recite the step of “providing a molecular model comprising one or more target regions selected from the group consisting of at least a portion of (i) a peptidyl transferase site, (ii) an A-site, (iii) a P-site, (iv) an E-site, (v) an elongation factor binding domain, (vi) a polypeptide exit tunnel, and (vii) a signal recognition particle (SRP) binding domain from the atomic co-ordinates for *Haloarcula marismortui* large ribosomal subunit found on Disk 1 under file name 1JJ2.RTF, 1JJ2.TXT, 1JJ2.PDB, PDB1FFK.DOC, or PDB1FFK.ENT, or deposited at the Protein Data Bank under accession number PDB ID: 1JJ2 or 1FFK, or derived from said *Haloarcula marismortui* atomic co-ordinates by molecular modeling.” Step (b) of claim 33 has been amended to recite the step of “using the molecular model to identify a candidate molecule that can bind to the one or more target regions in the molecular model.” In addition, step (c) has been added. Support for the amendments may be found, for example, in claims 33, 34, 35, 45, 47, 49, and 51, and on page 15, lines 17-25, page 32, lines 4-16, page 35, lines 3-20, page 39, lines 5-14, and the table appearing on page 185 of the application as originally filed.

Claim 37 has been amended to recite “the additional step of repeating one or more of steps (a) through (c) to identify a modified molecule.” Support for the amendment may be found, for example, on page 84, line 1 of the application as originally filed. Claim 40 has been amended to specify that the production step occurs after determining whether the modified molecule modulates ribosomal activity. Support for the amendment may be found, for example, in claim 40 and on page 160, lines 21-23 of the application as originally filed. Claims 44, 47, 49, 51, and 53 have been amended to recite “one or more target regions” to correct antecedents in view of the amendment to claim 33. Support for the amendments to claims 58 and 59 may be found, for example, in the table appearing on page 185 of the application as filed. Support for new claim 107 can be found, for example, in claims 33, 34, 35, 45, 47, 49, and 51, and on page 15, lines 17-

25, page 35, lines 3-20, page 39, lines 5-14, and the table appearing on page 185 of the application as originally filed. Applicants believe that the amendments introduce no new matter.

In view of the amendments and/or cancellations to the claims, Applicants request that the inventorship of the application be amended pursuant to 37 C.F.R. 1.48(b) to delete Joseph A. Ippolito from the inventive entity because his invention is no longer being claimed in this application. The inventive entity of the claimed subject matter includes Thomas A. Steitz, Peter B. Moore, Poul Nissen, Nenad Ban and Jeffrey Hansen. In addition, Applicants include a check to cover the processing fee as required by 37 C.F.R. 1.48 (b)(2).

Applicants respectfully request that the Examiner consider the Supplemental Information Disclosure Statement, PTO-1449 form and the art cited thereon submitted to the Office on March 4, 2003. For convenience, Applicants enclose a copy of the Supplemental Information Disclosure Statement and PTO-1449 form. Applicants request that the Examiner initial each entry and then sign and date the PTO-1449 form, and then return a copy of the completed PTO-1449 form to the undersigned for completion of Applicants files.

The outstanding objections and rejections are discussed in the order in which they appear in the Office Action.

Restriction/Election Requirement

According to pages 2-7 of the outstanding Office Action, the Office issued a restriction to one of the following inventions under 35 U.S.C. §121 including Group I (claims 51-62), Group II (claims 63-98), Group III (claims 99-103), Group IV (claims 104 and 105), and Groups V through XIV (claim 106 to the extent that it relates to a particular antibiotic binding site). Applicants hereby confirm the provisional election with traverse of the invention of Group I, namely claims 1-62 as originally filed. Applicants believe that a search of the subject matter of Group I would necessarily include a search of the subject matter of Group II. The Office Action indicates that the claimed subject matter of both Groups I and II is classified as belonging to class 702, subclass 19. Accordingly, Applicants believe that it would not be unduly burdensome to search and examine the subject matter of Groups I and II. Applicants respectfully request rejoinder of Groups I and II.

Title Not Descriptive

According to page 7 the outstanding Office Action, the title presently stands objected to for not being descriptive. Applicants believe that the amended title overcomes this objection and, therefore, respectfully request that this objection be reconsidered and withdrawn.

Obviousness Double-Patenting Rejection

According to pages 7 through 9 of the outstanding Office Action, claims 33-62 presently stand rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 76 and 79-105 of co-pending U.S. Patent Application Serial No. 09/922,251.

Although Applicants disagree with the Office's position that the terms "complementary" and "binding specificity" are unclear, Applicants respectfully request that this provisional rejection be held in abeyance until the pending claims, but for any outstanding double patenting rejection, are deemed to be in condition for allowance. Applicants at that time intend to file a terminal disclaimer if appropriate under the circumstances.

Applicants wish to bring the following cases to the Examiner's attention to determine whether other potential double patenting issues may apply: U.S. Serial No. 09/635,708 (issued as U.S. Patent No. 6,638,908); U.S. Serial No. 10/391,491; U.S. Serial No. 10/391,289; U.S. Serial No. 10/072,634; and U.S. Serial No. 10/211,931.

Rejection Under 35 U.S.C. §101

According to pages 11-12 of the outstanding Office Action, claims 32, 33, 34, 36, 37 and 41-62 presently stand rejected under 35 U.S.C. §101 for allegedly being directed to non-statutory subject matter. Claims 32, 34 and 55 have been cancelled thereby obviating this rejection. Applicants respectfully traverse this rejection of claims 33, 36, 37, 41-54, and 56-62, for the following reasons.

Without acquiescing to the merits of this rejection, Applicants have introduced the limitation of claim 35 into independent claim 33. Claim 35 was not rejected on these grounds. Applicants submit that the amendment to claim 33 overcomes this rejection. Claims 36, 37, 41-

54 and 56-62 depend from and, therefore, incorporate the limitations of amended claim 33. In view of the foregoing, Applicants respectfully request that this rejection be reconsidered and withdrawn.

Rejection Under 35 U.S.C. §112, First Paragraph

According to pages 11-12 of the outstanding Office Action, claims 3, 7, 21, 22, 58 and 59 presently stand rejected under 35 U.S.C. §112, first paragraph for allegedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to make and/or use the claimed invention. Claims 3, 7, 21 and 22 have been cancelled thereby obviating this rejection. Applicants respectfully traverse this rejection of claims 58 and 59, for the following reasons.

Claims 58 and 59 have been amended to include references to the atomic co-ordinates recorded on Compact Disk No. 1 under file names PDB1FFK.DOC, PDB1FFK.ENT, PDB1FFZ.DOC, PDB1FFZ.ENT, PDB1FG0.DOC, PDB1FG0.ENT, 1JJ2.RTF, 1JJ2.TXT, and 1JJ2.PDB. Applicants submit that the specification (see, for example, pages 184-185) and the compact disk containing these atomic co-ordinates comply fully with 37 C.F.R. 1.52(e). Applicants submit that the data recorded on Compact Disk No. 1 is incorporated properly into the application as filed, and that references to the atomic co-ordinates recorded on Compact Disk No. 1 in claims 58 and 59 is proper.

Applicants respectfully disagree with the Office's position that because "atomic coordinate information [in the Protein Data Bank] is continuously updated it is not clear what information is intended." Applicants understand that each PDB identifier (PDB ID) is associated with a specific set of atomic co-ordinates and that changes to the atomic co-ordinates require a new PDB ID to be assigned to the new set of atomic co-ordinates. See, for example, page 6 of the attached document entitled "PDB Data Deposition and Data Processing Procedures," which under the heading "**How can I replace coordinates?**" states "if the [co-ordinate] file has been released, the new set would receive a new ID code and should be deposited in a new [deposition] session." Accordingly, Applicants understand that a particular PDB identifier is associated with a particular set of atomic co-ordinates once those co-ordinates have been released.

In view of the foregoing, Applicants respectfully request that this rejection be reconsidered and withdrawn.

Rejection Under 35 U.S.C. §112, Second Paragraph

According to pages 13 and 14 of the outstanding Office Action, certain terms in the claims presently stand rejected under 35 U.S.C. §112, second paragraph for allegedly being vague and indefinite.

Claims 5-7 were rejected on the grounds of being confusing. Applicants submit that claims 5-7 have been cancelled thereby obviating this rejection.

Claim 33 and all the claims depending from claim 33 have been rejected on the grounds that the term "complementary to the ribofunctional locus" is vague and indefinite. Although Applicants disagree, Applicants have amended claim 33 and, therefore, the claims depending from claim 33 to remove this language.

Claim 37 presently stands rejected on the grounds that the term "modified molecule" is vague and indefinite. Applicants respectfully disagree and submit that the skilled artisan would appreciate that the modified molecule of claim 37 differs in some way, i.e., is modified, from the candidate molecule identified in step (b) of claims 33 and 36.

Claim 40 presently stands rejected on the grounds that the language "the additional step of producing the modified molecule" is not clear. Although the Applicants disagree, Applicants have amended claim 40 to recite that, "after determining whether the modified molecule modulates ribosomal activity" the method then includes the step of "producing the modified molecule." This scenario would occur, for example, after testing has been completed and the modified molecule then is produced in commercially significant quantities. This concept is described, for example, in the fifth paragraph appearing on page 160 of the application as filed.

Claims 41 and 42 presently stand rejected on the grounds that the term "antibiotic analogue" is vague and indefinite. Applicants believe that this term is unnecessary and, therefore, have removed this term from claims 41, 42 and (although not mentioned in the Office Action) claim 43.

In view of the foregoing amendments and remarks, Applicants respectfully request that this rejection be reconsidered and withdrawn.

Rejection Under 35 U.S.C. §103

According to pages 14-16 of the outstanding Office Action, claims 1-31 presently stand rejected as being obvious in view of the teachings of Brunger *et al.* (2000) Acta Crystallographica, D54, Part 9, 905-921. Claims 1-31 have been cancelled thereby rendering this rejection moot. Accordingly, Applicants respectfully request that this rejection be reconsidered and withdrawn.

Objection to the Disclosure

According to page 16 of the outstanding Office Action, the disclosure is objected to for inclusion of embedded hyperlinks and/or other forms of browser-executable code.

Applicants submit that the hyperlinks are not necessary for the application's compliance with 35 U.S.C. 112, first paragraph or that they be active. However, because the identified web sites may be of general interest to the skilled artisan reviewing the application, Applicants have attempted to deactivate the links via the amendments described herein. In view of the foregoing, Applicants request that this objection be reconsidered and withdrawn.

CONCLUSION

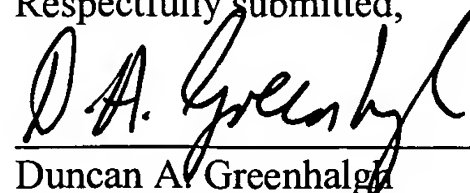
In view of the foregoing, Applicants believe that the case is in condition for immediate allowance. Early favorable action is respectfully solicited. The Examiner is invited to contact the undersigned with any questions about this paper.

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Respectfully submitted,



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